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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
VO, LILIAN	

ART UNIT	PAPER NUMBER
2195	

DATE MAILED: 09/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/040,606	WYATT, DAVID A.	
	Examiner	Art Unit	
	Lilian Vo	2195	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 June 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 - 32* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 - 32* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1 – 32 are pending.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1 – 32 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In the specification, there is no clear and exact written description for "physical resource object", and "virtual resource object". Physical resources is described as functional units such as graphics controller rendering engines, digital video output units, digital display outputs, video capture ports, etc., and "virtual resource" as memory bandwidth. However, there is no teaching of "physical resource object". The term "Physical resource object" is mentioned in [0012], and [0046] however, applicant uses the language of claim 1 in Fig. 6 and related description of that Figure.

Additionally, claim 1, recites "creating a tree relationship for the parent and child objects to the physical and virtual resources objects", while in the specification there is not clear and

exact written description for this relationship. On page 4, applicant teaches that "by examining the various parent-child relationships and their associated physical and virtual resources in the global resource namespace, the resource manager can determine how the various system resources are being consumed and balance the net available parent resources globally, as well as across the individual child consumers. Interfaces are provided whereby software drivers and driver components can gain access to the global resource namespace information through the resource manager". While "parent object" is defined as "resource producers" and "child object" is defined as "resource consumers", it is not clearly described as what is the relationship between parent and child. In other words, in the specification by examining the various "parent and child relationship" and their physical and virtual resource, various system resources are balanced. In claim 1 however, the "tree relationship of the parent and child objects" to the physical and virtual resource objects are created. The language of the specification does not clearly describe this tree relationship of the parent and child objects. What is the relationship between the "parent and child object" to the "physical and virtual resource?

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1 – 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sankaranarayan et al. (US 6,799,208, hereinafter Sankaran).

While claims are rejected under 35 USC 112, first paragraph as stated above, in order to advance prosecution, claims will be treated on the merits in view of Examiner's best understanding of the specification and the prior art.

5. As to **claims 1, 14**, Sankaran teaches the invention as claimed including, a computer implemented method, comprising:

storing a list of physical resource objects (col. 8, lines 1-9);

storing a list of virtual resource objects (col. 1, lines 10-17);

storing a list of parent and child objects (Fig.2, 32 (1), ... 32(A), and 104(1) ... 104(p)), a parent object to represent a physical resource object and a child object to represent a virtual resource object (col. 9 lines 6 – 34, col. 10 lines 17 – 20); and

creating a tree of relationships of the parent and child objects to the physical and virtual resource object (Fig. 17, 1700).

Sankaran, even though teaches of relating the tree structure of the resource to particular condition based on availability of the resource to notify the resource providers (See Fig. 17, and col. 9, lines 19-49) but does not clearly and explicitly explain the tree relationship for the parent and child objects (producer and consumer), and the physical and virtual resources (available and consumed resources). However, it is obvious for one ordinary skill in that art at the time the invention was made to make a data structure relating to who are the producers and consumers of the resources, and what amount of resources are available or in use at any time. For the reason to have a bookkeeping method and be able to utilize the resources efficiently. Therefore it would have been obvious for one ordinary skill in the art at the time the invention was made to related the resource tree structure of Sankaran to the producer and consumer of the resource as well as

consumed and available amount of resource for increasing the utilization and eventually the efficiency of the resource management system of Sankaran.

Regarding a root of the tree data structure to represent a physical device that consumes the available resources and the updating step of the records in claim 14, Sankaran teaches of these limitations in col. 9 lines 7 – 21 and col. 29, lines 41-49, respectively.

6. As to **claim 2**, Sankaran teaches the invention as claimed including the method of claim 1, wherein storing a list of virtual resource objects includes storing an object representing system memory bandwidth (col. 4, lines 38-47).

7. As to **claim 3**, Sankaran teaches the invention as claimed including wherein storing a list of child objects includes storing an object representing a functional unit that consumes bandwidth (col. 4, line 65 to col. 5, line 7).

8. As to **claim 4**, Sankaran teaches the invention as claimed including, wherein storing an object representing a functional unit that consumes bandwidth includes storing an indication of the amount of bandwidth consumed (col. 4, line 65 to col. 5, line 7).

9. As to **claims 5 - 7**, Sankaran does not explicitly teach of consuming bandwidth that represents "an overlay unit", "cursor unit", and "display output unit". However, it is well known in the art at the time the invention was made to use resource as a finite quantity of computing component in the computer system representing hardware such as "an overlay unit", "cursor unit" and "display output unit", as suggested by Sankaran in col. 4, lines 38-47.

10. As to **claim 8**, Sankaran teaches the invention as claimed including, wherein a root of the tree represents a physical resource object (col. 9 lines 7 – 21).

11. As to **claim 9**, Sankaran teaches the invention as claimed including, wherein storing a list of child objects includes storing an object representing a functional unit that consumes bandwidth (col. 4, line 65 to col. 5, line 7).

12. As to **claims 10 - 13**, Sankaran does not explicitly teach of consuming bandwidth that represents "an overlay unit", "cursor unit", "display output unit", and "local graphic memory". However, it is well known in the art at the time the invention was made to use resource as a finite quantity of computing component in the computer system representing hardware such as "an overlay unit", "cursor unit", "display output unit", and "local graphic memory", as suggested by Sankaran in col. 4, lines 38-47.

13. As to **claims 15 - 16**, they are rejected on the same ground as stated in claims 3, and 5 - 8.

14. As to **claims 17 - 29**, they are rejected on the same ground as stated in claims 1 - 13 respectively.

15. As to **claims 30 - 32**, they are rejected on the same ground as stated in claims 14 - 16 respectively.

Response to Arguments

16. Applicant's arguments filed on 6/12/06 have been fully considered but they are not persuasive for the reason set forth below.

17. Applicant argues that "one of ordinary skill in the art would understand from reviewing these sections of the application that physical and virtual resource objects are representations of physical and virtual resource in a object-oriented paradigm..." (page 7 4th paragraph). As stated above, the term "physical resource object" is mentioned in [0012], and [0046] but there is no clear and exact written description in the specification. Object-oriented is a popular buzzword that can mean different things depending on how it is being used. Object-oriented programming (OOP) refers to a special type of programming that combines data structures with functions to create re-usable objects. Object-oriented graphics is the same as vector graphics. Otherwise, the term object-oriented is generally used to describe a system that deals primarily with different types of objects, and where the actions you can take depend on what type of object you are manipulating. For example, an object-oriented draw program might enable you to draw many types of objects, such as circles, rectangles, triangles, etc. Applying the same action to each of these objects, however, would produce different results. If the action is Make 3D, for instance, the result would be a sphere, box, and pyramid, respectively.

With respect to applicant's remark that "a tree relationship for the parent and child objects to the physical and virtual resource objects is clearly depicted" in fig. 2 (page 8, 1st paragraph), the examiner disagrees. The examiner still unable to determine what is the relationship between the "parent and child object" to the "physical and virtual resource"?

Applicant argues that Sankaran does not disclose storing a list of physical resource objects, virtual resource objects, or a list of parent and child objects (page 9, 1st – 3rd paragraph), the examiner disagrees. Sankaran discloses and/or suggests storing a list of physical resource objects (col. 8, lines 1-9), storing a list of virtual resource objects (col. 1, lines 10-17), storing a list of parent and child objects (Fig.2, 32 (1), ... 32(A), and 104(1) ... 104(p.)).

If applicant believes these citations do not disclose such teaching or provide proper meaning of the claimed invention, applicant must provide a clear definition and the location of these limitations in the specification.

As noted by the Court of Customs and Patent Appeals, "argument cannot take the place of evidence." In re Langer, 503 F.2d 1380, 1395, 183 USPQ 288, 299 (CCPA 1974). In re Piasecki, 745 F.2d 1468, 1472, 223 USPQ 785 788 (Fed. Cir. 1984). Applicants have not submitted sufficient evidence to rebut the strong prima facie case of obviousness established by Examiner.

18. Applicant argues that the root of the tree data structure in Sankaran does not represent a physical device because the configuration 124 does not represent a physical device (page 9 last paragraph – page 10 1st paragraph), the examiner disagrees. As stated in col. 9 lines 19 – 21, "a configuration is a data structure holding a collection of one or more resources descriptors 126 for corresponding resources needed to perform a task in the system. Therefore, it is the configuration of the system and the system is consider a physical device.

19. Regarding applicant's remark that Sankaran organizes its resource data structure by different activities or tasks and not by each physical device as recited in claims 14 and 30, the

data structure of Sankaran is fundamentally different than the tree data structure recited in claim 14 and 30" (page 10 2nd paragraph), applicant is arguing a feature of the invention not specifically stated in the claim language, which is improper. Claim subject matter, not the specification, is the measure of invention. Limitations in the specification cannot be read into the claims for the purpose of avoiding the prior art. In re Self, 213 USPQ 1,5 (CCPA 1982); In re Priest, 199 USPQ 11,15 (CCPA 1978).

Conclusion

20. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lilian Vo whose telephone number is 571-272-3774. The examiner can normally be reached on Thursday 8am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on 571-272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Lilian Vo
Examiner
Art Unit 2195

lv
August 31, 2006

SUPERVISORY PATENT EXAMINER